

RECEIVED  
CENTRAL FAX CENTER

APR 24 2009

In the Claims:

Kindly amend the claims as follows:

1. (Currently amended) Pressure amplifier including a low pressure inlet for supplying medium at low pressure, a low pressure piston with a first operational area and at least one high pressure piston with a second operational area, the second operational area being of same size or less than the first operational area, and at least one high pressure outlet, wherein a low pressure area (1) communicates with an operational chamber (29), which is limited by the low pressure piston (26) and a surrounding low pressure cylinder (7); where the at least one high pressure piston (12) is provided interacting with the low pressure piston (26), and the at least one high pressure piston (12) is co-axially arranged in a high pressure cylinder (13) relative to the low pressure piston; wherein a changeover valve (19) is coaxially arranged in the low pressure cylinder (7), and in connection with the changeover valve (19) there is arranged at least one spring (10,36) coaxially around an impulse rod (24); wherein the at least one spring (10,36) is arranged to be compressed at the movement of the low pressure piston so that at least one spring loaded locking mechanism (3, 35) is instantly released, the locking mechanism being built up of one or more springs (4) that press a locking member (3, 35) against a corresponding lock abutment formed in the a valve (19), so that the valve shifts and opens for medium supply to the operational chamber while simultaneously the low pressure piston, via contact with the high pressure piston, is moving the latter towards the high pressure outlet (15), whereby the impulse rod (24) via impulse spring (10,36) and mechanical stops (8,9,22,23,25) in the end position releases the locking mechanism (3, 35) whereby the valve shifts and the low pressure medium, via the a low pressure connection (6) via a check valve (11), presses the high and low pressure pistons back.

2. (Previously presented) Pressure amplifier according to claim 1, characterised in that the locking mechanism is built up in at least one boring provided radially in the low pressure cylinder (7), and that in the boring a ball or a wedge (35) has been provided, the ball or wedge interacting with a spring (4) so that the ball or wedge (35) are pressed down into one of two recesses (34) with same dimensions as the part of the ball or wedge (35) provided in the cylindric surface of the valve (19).

3. (Previously presented) Pressure amplifier according to claim 1, characterised in that the locking mechanism is built up in an annular, flat, round groove (45) provided at the inner side of the low pressure cylinder (7), so that at least two U-shaped locking members (3) are arranged in the groove, the locking members (3) being chamfered at the ends (17), that a number of radially oriented borings (43) have been provided, corresponding to the number of locking members (3), and that in each boring (43) there is arranged a spring (4) pressing the locking members (3) towards the centre line (44) of the cylinder so that the chamfered ends (17) of the locking members co-operate hold a locking element (18) arranged in the valve in one of two positions on respective chamfered sides (17) of the locking members (3).

4. (Previously presented) Pressure amplifier according to claim 3, characterised in that the pressure amplifier is double-acting so that the impulse rod (24) is interacting with two high pressure pistons (12) arranged at opposite sides of the operational chamber (29), and that furthermore two high pressure outlets (15) are provided.

5. (Previously presented) Pressure amplifier according to claim 1, characterised in that the high pressure piston (12) and impulse rod (24), respectively, are loosely connected to the low pressure piston (26) by means of flanges that are provided at one end of the high pressure piston and the impulse rod, respectively, the flanges (46) largely fitting in corresponding cavities provided in the end faces of the low pressure piston so that the flanges are loosely held by means of locking rings (8).

6. (Previously presented) Pressure amplifier according to claim 1, characterised in that the high and low pressure pistons, the high and low pressure cylinders, the check valve and one or more additional check valves, the low pressure connection and a high pressure connection with associated springs and locking mechanisms are arranged coaxially and symmetrically around a common centre line (44).

7. (Previously presented) Pressure amplifier according to claim 1, characterised in that the connections between the at least one boring (40) and parallel axial connections (6,16,40,41) and annular channels (30,31,32,33,34,39) are established by radial milling from inside the at least one boring.

8. (Previously presented) Pressure amplifier according to claim 1, characterised in that one or two of the pistons are used for driving a pump fitted thereon for pumping another medium than the drive medium, or for driving other oscillating apparatuses.

9. (Previously presented) Pressure amplifier according to claim 1, characterised in that externally of the changeover valve, an annular turning is provided with a diameter less than the outer diameter of the changeover valve and a length in longitudinal direction of the pressure amplifier, the length being substantially less than the length of the changeover valve, and that at least two holes are provided in the changeover valve radially from the interior of the changeover valve to the outside of the changeover valve, and that one hole is provided coinciding with the annular turning, and that the other hole is provided outside the annular turning.

10. (Previously presented) Pressure amplifier according to claim 4, wherein the two high pressure outlets are brought together to a common outlet.